

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference NVDAP1331PCT	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/US2004/017655	International filing date (day/month/year) 04/06/2004	(Earliest) Priority Date (day/month/year) 05/06/2003
Applicant NVIDIA CORPORATION		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 2a

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/017655

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04L29/06 G06F13/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 427 171 B1 (PHILBRICK CLIVE M ET AL) 30 July 2002 (2002-07-30) abstract column 2, line 26 - column 9, line 18 claims 1-12	1-6
A	US 5 937 169 A (CONNERY GLENN WILLIAM ET AL) 10 August 1999 (1999-08-10) the whole document	1-6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

22 October 2004

Date of mailing of the international search report

02/11/2004

Name and mailing address of the ISA

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Authorized officer

Karavassilis, N

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/017655

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6427171	B1	30-07-2002	US 6434620 B1 13-08-2002
			US 6389479 B1 14-05-2002
			US 6226680 B1 01-05-2001
			US 2002147839 A1 10-10-2002
			US 2003079033 A1 24-04-2003
			US 2004062246 A1 01-04-2004
			US 2004100952 A1 27-05-2004
			US 2004117509 A1 17-06-2004
			US 2001047433 A1 29-11-2001
			US 2002091844 A1 11-07-2002
			US 2004003126 A1 01-01-2004
			US 2004030745 A1 12-02-2004
			US 6427173 B1 30-07-2002
			US 2004111535 A1 10-06-2004
			US 2001021949 A1 13-09-2001
			AU 1533399 A 21-03-2000
			CA 2341211 A1 09-03-2000
			DE 1116118 T1 14-08-2003
			EP 1116118 A1 18-07-2001
			JP 2002524005 T 30-07-2002
			WO 0013091 A1 09-03-2000
			US 6247060 B1 12-06-2001
			US 2001023460 A1 20-09-2001
			US 2001027496 A1 04-10-2001
			US 2002087732 A1 04-07-2002
			US 2002095519 A1 18-07-2002
			US 2002161919 A1 31-10-2002
			US 2001036196 A1 01-11-2001
			US 2001037397 A1 01-11-2001
			US 2001037406 A1 01-11-2001
US 5937169	A	10-08-1999	AU 1126699 A 17-05-1999
			WO 9922306 A1 06-05-1999

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2004/017655

International filing date (day/month/year)
04.06.2004

Priority date (day/month/year)
05.06.2003

International Patent Classification (IPC) or both national classification and IPC
H04L29/06, G06F13/38

Applicant
NVIDIA CORPORATION

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/017655

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/017655

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-6
Inventive step (IS)	Yes: Claims	
	No: Claims	1-6
Industrial applicability (IA)	Yes: Claims	1-6
	No: Claims	

Citations and explanations

see separate sheet

Re Item V.

1. The following document is referred to in this communication:
D1 : US 6 427 171 B1 (PHILBRICK CLIVE M ET AL) 30 July 2002 (2002-07-30)
2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claims 1 (method), 2 (system), 3 (method), 4 (method), 5 (system) and 6 (method) is not new in the sense of Article 33(2) PCT.
- 2.1 With respect to independent claim 1, document D1 discloses (the references in parenthesis applying to this document):

A method of processing frames for a TCP connection, comprising:
processing a first portion of the frames using an offload unit to produce first processed frame data;
processing a second portion of the frames using the offload unit to produce second processed frame data; and
processing the second processed frame data using a TCP stack executed on a CPU to provide third processed frame data (col. 4, lines 1-24).

Therefore the subject matter of claim 1 is fully anticipated by D1.

- 2.2 The subject of the rest of independent claims 2-6 is also fully anticipated by D1.
For claim 2 see D1, col. 4, lines 1-61.
For claim 3 see D1, col. 3, lines 21-33.
For claim 4 see D1, col. 4, lines 6-20.
For claim 5, see D1, col. 6, line 57-col. 7, line 10; col. 8, lines 54- col. 9, line 5.
For claim 6, see D1, col. 7, lines 11-18.